

The dreaded F-word: How can Sri Lanka avoid a famine?

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Although the rising prices of essential food items is a major topic amidst the current crisis, the matter has been a growing concern for several years, especially following the Government's decision to adopt an organic fertiliser-only policy last year. The country's agriculture sector was crippled by that decision, and combined with the inability to import adequate fertilisers and food items due to the foreign reserves crisis, the nation is likely to experience a food shortage in the foreseeable future - which is likely to be even more difficult to handle than the rising food prices at present.

There are also growing concerns about malnutrition in the country as a result of the declining ability to purchase food items, and some experts have also raised concerns about a possible famine.

These issues were brought up during a discussion on "A food crisis owing to economic issues in Sri Lanka? Issues and solutions" organised by the Nutrition Society of Sri Lanka with the participation of Senior Prof. Buddhi Marambe and Prof. Gamini Pushpakumara of the Peradeniya University.

Failed organic fertiliser plan

The impact of the Government's decision to go organic in a short period of time without a proper plan, according to Prof. Marambe, is the major factor that has raised concerns about a food shortage in the future. He stressed the importance of Sri Lanka learning a lesson from the consequences of the organic-only plan, and noted that it is crucial to take decisions based on scientific facts when implementing such national-level plans.

Prof. Marambe said that the Government's organic-only plan was a decision that turned the agriculture-based economy upside down, and noted that when the Government decided to rescind the said decision, the damage had already been done.

"This decision destroyed our agriculture-based economy in a minute," he opined, adding that it will take years, at the least, to revive Sri Lanka's agriculture sector, and that it is in this context that he discussed whether Sri Lanka will have to face a food shortage. Had actions with regard to the Government's decision to ban chemical fertilisers been taken based on a scientific basis, he said, Sri Lanka would not have had to face the prevailing situation concerning food and the agriculture sector, and it would not have been necessary to rescind this decision.

Explaining the consequences of attempting to promote organic farming without a proper scientific plan, Prof. Marambe noted that studies conducted in Sri Lanka have shown that in the case of paddy cultivation, it is through using both organic and chemical fertilisers that it is possible to produce maximum yield.

Quoting statistics on the allegations that Sri Lanka uses high amounts of synthetic fertilisers and pesticides compared to other countries, he pointed out that Sri Lanka uses a relatively lower amount

of synthetic fertilisers and pesticides compared to countries like India, Bangladesh, India, Vietnam, and Thailand. He added that these scientific facts not being presented accurately, is one of the reasons that led politicians to be misled concerning the organic fertiliser plan.

Food production and food imports

Prof. Marambe quoted estimates about the expected decline in yield due to the Government's decision to go organic, issued by the Sri Lanka Agricultural Economics Association. While it had been estimated that the paddy yield would decline by 30-35%, the estimated decline for tea was 40-50%. The maize yield had been predicted to decline by 50%. Potato and sugarcane had been predicted to decline by 30-50% and by 30-40%, respectively. The projected decline in the cinnamon yield was 25%. It was also noted that floriculture and foliage plant-based environments as well as controlled environment agriculture and hydroponics would decline by almost 100%.

Based on the available data, he noted that in the 2021/2022 Maha Season, the paddy yield has declined by around 50%, while the maize yield has declined by 65-70%. Year-on-year food inflation, the increase in food prices during a certain period of time compared to the same period last year, according to the Department of Census and Statistics (DCS), was 30.2% in March and 46.6% in April. In November-December last year, tea production had declined by around 12 million kg.

Prof. Marambe further pointed out that in a context where Sri Lanka's annual rice requirement remains at around 2.3-2.4 million kg, the decline in the paddy yield has forced Sri Lanka to increase rice imports, among other imports, and that this is evident when analysing the amount of rice imported by the country. In 2020, Sri Lanka had imported 14,000 metric tonnes (MTs) of rice. However, this amount had increased to 147,000 MTs by 2021. Until 15 April this year, Sri Lanka has imported more than 300,000 MTs of rice.

"It is not only the fertiliser issue that exists in the country's agriculture sector," he noted, adding that other man-made aspects also affect the sector, and that therefore, resolving the fertiliser crisis alone will not revive the country's agriculture sector. Among those reasons are the relatively lower rate of adoption of novel technologies, inadequacy in value addition to export agriculture products such as tea, post-harvest losses, inadequate efforts made for crop-animal integration, and other financial issues pertaining to the sector.

Food security

Prof. Marambe noted that in the current context, it is crucial to pay attention to various elements of food security - i.e. availability (whether there is enough food for everyone), access (whether the available food can be reached efficiently), affordability (whether food can be bought at a fair price), quality (whether the available food is edible), nutrition (whether the available food forms a balanced diet), and safety (whether the available food could harm health) - and pay attention to each aspect simultaneously.

In fact, the above mentioned situation has affected Sri Lanka's food security during the past two years, Prof. Marambe said, highlighting that data presented by the Global Food Security Index from 2012 to 2021 has shown the same.

In 2012, 2015, and 2019, among South Asian countries - Sri Lanka, India, Pakistan, Nepal, and Bangladesh - Sri Lanka had been identified as the country with the highest food security. However, in 2020, Sri Lanka had been ranked second in the same list of countries while India ranked first, and in 2021, Sri Lanka had declined to the third place while India and Pakistan were in the first and second places, respectively.

Future steps

Prof. Marambe explained several steps that need to be taken in order to mitigate the impacts of the said situation.

He noted that the first step should be immediately revoking the three Gazette notifications issued to appoint task forces for agriculture in order to allow the Department of Agriculture and other relevant public institutions to perform their duties in accordance with their own recommendations.

“Sri Lanka should then continue international good agricultural practices, which Sri Lanka began in 2016,” he added, describing several steps that fall under this step. Among them are, minimising the misuse of technologies, adopting integrated plant nutrient systems and integrated pest management systems and engaging in precision agriculture (the science of improving crop yields and assisting management decisions using high technology sensor and analytical tools).

Other steps Sri Lanka needs to pay attention to in the future include, making agriculture inputs such as seeds and planting materials, fertilisers and pesticides available at affordable prices; taking soil conservation measures and continuing to add organic matter to the soil as recommended by state departments, research institutes and universities; reducing post-harvest losses, especially of perishables through focusing on packaging and using technologies; selecting crops, agro-ecological regions, and niche markets in order to promote organic farming; re-organising the agriculture extension system for effective communication; and paying attention to food alternatives.

At the same time, he opined that Sri Lanka must stop romanticising agriculture by getting the correct people, making correct decisions based on scientific evidence, and implementing those decisions at the correct time.

He further stressed that if Sri Lanka pays attention to the steps necessary to revive the agriculture sector, the country would be able to get the results it needs gradually, adding that the country needs to be prepared to face a food shortage, not a famine.

Meanwhile, Prof. Pushpakumara spoke about solutions to face a possible food crisis through underutilised or neglected crops and resources.

He noted that the likely food shortage needs to be dealt with not through one specific measure, but through diverse measures such as increasing food production through the collaboration of different sectors of agriculture, adding that every possible step should be taken to produce adequate food within the country. The proper distribution of food and reducing food wastage, are other steps the country needs to pay attention to in the future, according to him.

Emphasising that it is important to discuss what can be done in different stages of food production and consumption, Prof. Pushpakumara said that it is also important to identify that there are issues in both the production and consumption of food, which must be managed.

The recommended types and amounts of food, according to him, should include 200 g of fruits, 200 g of vegetables, and 100 g of legumes and leafy vegetables, per day, which he said does not receive adequate attention in daily life. It was also noted that both the Global Hunger Index and the Global Food Security Index have ranked Sri Lanka as poor in terms of food security.

“The impact of Covid-19, the current United States dollar crisis, the fertiliser crisis, the lack of liquefied petroleum gas, power cuts, and high prices of food items worsen the food and nutritional security in various ways,” he said, noting that this situation affects the different aspects of food security highlighted by Prof. Marambe, eventually leading to health and nutritional issues.

With regard to food items needed during and to prevent a food crisis, he said that there are food items that are mostly freely available, which require low inputs, give many benefits, and are not difficult to cultivate. Describing how a large number of crops can be cultivated in domestic environments, he said that ensuring that those crops have a good environment to grow is crucial, and that it can give higher yields without much effort.

“It is crucial to understand what crops can be grown in the environment one lives in, and how such an environment can be used and prepared to grow those crops,” he added.

When finding solutions to a possible food shortage and to address the underutilisation of food and resources pertaining to cultivating food, the solutions can be categorised as individual-based solutions, family-based solutions, community-based solutions, district-based solutions, country-based solutions, and global solutions. It is also important to gradually move from the basic methods to more complex methods, and to combine different methods when possible, according to Prof. Pushpakumara.

It was also noted that understanding what sort of methods can be employed as short term and long term steps is vital.

According to what was observed by the experts, even though a famine is less likely in the foreseeable future, the likelihood of a food shortage in Sri Lanka is a pressing concern, and preparing to face such is the responsibility of the entire country. Even though the Government is mainly responsible for ensuring that food production and supply are taking place properly, the people cannot neglect their responsibility when it comes to household crop cultivation.

As was highlighted by both professors, preventing an unmanageable food shortage in the future will require everyone taking their role seriously. If this is not done, then the effects of the mistakes made over the past two years will only be amplified in those to come.

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